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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/986,631	11/09/2001	Moo-Jong Lim	8733.532.00	5940

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EXAMINER

TRAN, HENRY N

ART UNIT	PAPER NUMBER
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2674

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DATE MAILED: 06/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/986,631

Applicant(s)

LIM ET AL.

Examiner

HENRY N TRAN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
5) ☒ Claim(s) 8-22 is/are allowed.
6) ☒ Claim(s) 1-7 and 23-25 is/are rejected.
7) ☒ Claim(s) 26 is/are objected to.
8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 09 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This Office action is in response to the applicant's amendment received 3/18/04 (Paper No. 9). The amendments to the claims have been entered. Claims 1-26 are pending in this application. Applicant's remarks were considered, with the results set forth as following.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-7 and 23-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Yoshihara et al (U.S. Patent No. 6,115,016, hereinafter referred to as "Yoshihara").

Yoshihara teaches a field sequential liquid crystal display device, comprising: a liquid crystal display (LCD) panel 21 having an upper substrate 2, a lower substrate 4, and a liquid crystal display layer 13 there between; a back light 22 comprising a LED array 7 of different color R, G and B light sources disposed directly under at a down edge of the LCD and in a repeated sequence of Red, Green, and Blue LEDs as illustrated in figures 1, 2 and 6; a back light controlling means 35 for driving the LEDs in four sub-periods in synchronism with pixel data PD provided by a processor 31 controlling a lighting speed of each of the R, G and B light sources, which are serially or sequentially turned on/off for emitting red, green, blue lights in a

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first, a second, and a third sub-frame periods, and for emitting light of at least one of the colors in a fourth sub-frame period by driving a fourth light source, which is a combination of at least one of the color light sources, using a synchronous signal SYN read from the processor 31 that provided pixel data PD; wherein, the liquid crystal layer is a Ferroelectric Liquid Crystal (FLC) or an Optical Compensated Birefringent, which is an antiferroelectric liquid crystal; and one frame period is 1/60 second about 16.6 ms, see figures 1, 2, 4, 5 and 6; col. 4, line 64 to col. 5, line 64; col. 8, line 6 to col. 9, line 6. Claims 1-7 and 23-25 are therefore rejected.

Allowable Subject Matter

3. Claims 8-22 are allowed.
4. Claim 26 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

5. Applicant's arguments, see pages 7-10 of the amendment, filed 3/18/04, with respect to the amended claims 8-11 and claims 18-22 have been fully considered and are persuasive. The rejections of claims 8-11 and 18-22 has been withdrawn.
6. Applicant's arguments with respect to the newly amended claims 1-7 have been fully considered but they are not persuasive because Yoshihara back light controlling means 35 is read as the claimed element "...a means for controlling ..., whereby the light source are sequentially driven" as discussed in the rejection recited above.

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Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

8. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HENRY N. TRAN whose telephone number is 703-308-8410. The examiner can normally be reached on Mon – Fri from 8:00AM – 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, RICHARD A. HJERPE, can be reached at 703-305-4709.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or fax to:

703-872-9306

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Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding
should be directed to the Technology Center 2600 Customer Service Office whose telephone
number is 703-306-0377.

Henry N. Tran

HENRY N. TRAN
Examiner
Art Unit 2674

Hnt
May 19, 2004


RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600